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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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CONNOLLY BOVE LODGE & HUTZ LLP
1875 EYE STREET, N.W.
SUITE 1100
WASHINGTON, DC 20006

EXAMINER	
VALDEZ, DEVE E	

ART UNIT	PAPER NUMBER
1765	

MAIL DATE	DELIVERY MODE
02/03/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,574	UETA ET AL.	
	Examiner	Art Unit	
	DEVE VALDEZ	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6, 9, 10 and 13-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9,10 and 13-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

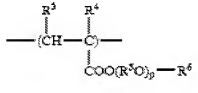
Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 9, 10, 15, 16, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/096823 (hereinafter, **YAMASHITA)**

3. Regarding claims 1, 4, 5, 9, 10, 15, 16, and 23, **YAMASHITA** teaches a cement admixture comprising two polymers A and B wherein the polymer (B) is an oxyalkylene group or polyoxyalkylene group and carboxyl group-containing polymer (p. 6, lines 19-21). Also, the cement admixture wherein the constituent unit (III) derived from an unsaturated monocarboxylic acid ester monomer (c) is a constituent unit (IV) derived from a (poly) alkylene glycol mono(meth) acrylic acid ester monomer (p. 7, lines 18-28).



wherein R^3 and R^4 are the same or different and each represents a hydrogen atom or a methyl group, the p R^5O groups are the same or different and each R^5O represents an oxyalkylene group containing 2 to 18 carbon atoms, p is a mean addition number of moles of the oxyalkylene groups and represents a number of 1 to 500, and R^6

represents a hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms (p. 7, lines 25-28; p. 8, lines 1-4). The unsaturated (poly) alkylene glycol ether monomer used are mixtures of methoxy (poly) propylene glycol and methoxy (poly) butylene glycol allyl ether [0108]. The (poly)alkylene glycol mono(meth)acrylic acid ester monomer, which provides the constituent unit is used as the unsaturated monocarboxylic acid ester monomer wherein p is not less than 2 and R^6 is a hydrogen atom such as polypropylene glycol mono(meth)acrylate and polybutylene glycol mono(meth)acrylate (p. 32, lines 34-35, p. 33, lines 1-17). The total content (% by mass) of the constituent units (I) and (II) in the polymer (A1) is preferably 50 to 100% by mass, more preferably 70 to 100% by mass, relative to the whole polymer (A1) (p. 15, lines 8-11) .

4. Regarding claims 2 and 3, **YAMASHITA** teaches the cement admixture wherein the ratio of the acid value of the polymers is 0.4-3.0 (p.15, lines 12-30). Also, **YAMASHITA** teaches the polymers of the cement admixture having a molecular weight of 10,000 (p. 54, line 35; p. 55, lines 1-11) .

5. Regarding claims 6, 8, and 24, **YAMASHITA** teaches the cement admixture the ratio between the polymers (A) and (B), namely the mixing ratio (polymer (A)/polymer (B)) (% by mass), is 1 to 99 and 99 to 1 (p. 55, lines 12-18;p. 64, lines 16-26).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

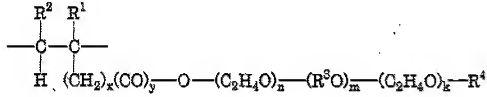
9. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/096823 (hereinafter, **YAMASHITA**) in view of **NISHIKAWA** (WO 2004/099100, hereinafter **NISHIKAWA**).

10. Regarding claims 13 and 14, **YAMASHITA** teaches the invention as substantially claimed, see paragraph 3.

11. However, **YAMASHITA** does not teach the polycarboxylic acid copolymer having a polyalkylene glycol side chain containing an oxyalkylene group having 3 or more

carbon atoms is obtained by polymerizing a monomer component containing a polyalkylene unsaturated monomer represented by formula (4).

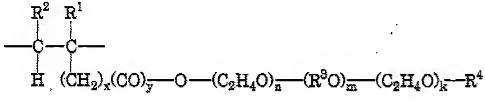
12. **NISHIKAWA** teaches a cement admixture and cement admixture composite comprising a polycarboxylic acid polymer containing a specific site, and the cement admixture composite comprises two or more species of cement admixtures, wherein at least one of is a said cement admixture (Abstract).The polycarboxylic acid polymer comprised in the cement admixture of the present invention is a polymer comprising two or more carboxylic acids or carboxylate salts in one molecule and into which a specific structure represented by the following formula (1) is introduced at a site (moiety) constituting the polymer:



wherein R^1 and R^2 may be the same or different and each represents a hydrogen atom or methyl group; R^3 may be the same or different and represents an alkylene group containing 3 to 18 carbon atoms; x represents a number of 0 to 2; y represents 0 to 1; n and k represents an average molar number of addition of an oxyethylene group, in which n is a number of 1 to 200 and k is a number of 1 to 200; m represents an average molar number of addition of the oxyalkylene group and is a number of 1 to 50; n+m+k is a number of 3 to 200; and R^4 represents a hydrogen atom or a hydrocarbon group containing 1 to 20 carbon atoms (p. 4, lines 6-26). The polyalkylene chain represented

by the repeating number of n, m, and k in the above formula (1) is a form of so-called A-B-A block copolymer.

13. The polycarboxylic acid polymer essentially comprised can be obtained by polymerizing one or two or more species of monomers having a carboxylic acid or a carboxylic salt and a polymerizable double bond in one molecule and one or more species of monomers represented by the following formula (2);



wherein R^1 and R^2 may be the same or different and each represents a hydrogen atom or methyl group; R^3 may be the same or different and represents an alkylene group containing 3 to 18 carbon atoms; x represents a number of 0 to 2; y represents 0 to 1; n and k represents an average molar number of addition of an oxyethylene group, in which n is a number of 1 to 200 and k is a number of 1 to 200; m represents an average molar number of addition of the oxyalkylene group and is a number of 1 to 50; n+m+k is a number of 3 to 200; and R^4 represents a hydrogen atom or a hydrocarbon group containing 1 to 20 carbon atoms (p. 6, lines 5-21). Furthermore, the cement admixture other than the cement admixture of the present invention in the cement admixture composite comprises a polymer, which is composed of monomer components containing polyalkylene glycol unsaturated monomer.

14. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the polycarboxylic acid polymer of **NISHIKAWA** with

the invention of **YAMASHITA** for the its art recognized function in cement admixtures. It is prima facie case obvious to combine individually old ingredients for their known additive function, i.e., it is obvious to add a known ingredient for its known function; *In re Linder* 173 USPQ 356; *In re Dial et al.* 140 USPQ 244.

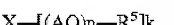
15. Claims 17-22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **YAMASHITA** et al. (U.S. Publication Application 2003/0199616, hereinafter **YAMASHITA**) in view of **TOMITA** et al. (U.S. Publication Application No. 2004/0107876, hereinafter **TOMITA**).

16. Regarding claims 17-22, 25, and 26, **YAMASHITA** teaches the invention as substantially claimed, see paragraph 3. **YAMASHITA** further teaches the cement admixture in combination with an oxyalkylene type antifoaming agent to be used in the invention (p.72, lines 31-35; p. 73, lines 1-4).

17. **However YAMASHITA does not teach a polyoxyalkylene compound containing at least one nitrogen atom and, at the same time, having an oxyethylene group and anoxyalkylene group having 3 or more carbon atoms in a molecule, and containing an aliphatic hydrocarbon structure in which 5 or more carbon atoms are bound successively.**

18. In the same field of endeavor of cement admixtures, **TOMITA** teaches a concrete composition comprising, as essential constitutents, an defoaming agent having a specific structure, a polycarboxylic acid polymer, cement, water, fine aggregate, and coarse aggregate (p. 12, lines 17-30). The defoaming agent comprises a

polyoxyalkylene compound having at least one nitrogen atom within the molecule and having an oxyethylene group or groups and an oxyalkylene group or groups containing not less than 3 carbon atoms and further having an aliphatic hydrocarbon structure containing at least 5 consecutively bound carbon atoms. One or two or more such polyoxyalkylene compounds may be used (p. 13, lines 1-6). The preferred polyoxyalkylene compound to be used are compounds represented by the following general formula:



Wherein X represent the residue of an active hydrogen-containing compound, the R^5 groups are the same or different and each represents a hydrogen atom, a hydrocarbon group, -Y-NR^6R^7, -COR^8, or –CH_2CH_2NHCO-R^9 (Y representing an alkylene group containing 1 to 10 carbon atoms, R^6 and R^7 being the same or different and each representing an hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms, R^8 and R^9 each representing a hydrocarbon group containing 1 to 30 carbon atoms or a group or a salt thereof), the AO groups are the same or different and each represents an oxyalkylene group containing 2 to 18 carbon atoms, the n are the same or different and each n represents the mean number of moles of the oxyalkylene group added and is equal to 1 to 300, k is 1 to 300 and wherein, when the total number of the oxyalkylene group(s) containing not less than 3 carbon atoms in the above-mentioned oxyalkylene groups are represented by u and v, respectively, the relations $0.1<u/(u+v)<0.9$ and $1<u+v<300$ are satisfied (p. 14, lines 33-35; p. 15, lines 1-27).

19. Since **YAMASHITA's** cement admixture composition can be combined with an oxyalkylene type antifoaming agent, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the defoaming agent that comprises polyoxyalkylene compound of **TOMITA** with the cement admixture of **YAMASHITA** for the benefit of exhibiting good strength and durability performance. It is prima facie case obvious to combine individually old ingredients for their known additive function, i.e., it is obvious to add a known ingredient for its known function; *In re Linder 173 USPQ 356; In re Dial et al. 140 USPQ 244.*

Response to Arguments

20. Applicant's arguments filed 11/18/2010 have been fully considered but they are not persuasive. The response is insufficient to rebut the obviousness rejection. Despite the applicant's arguments in view of the teachings of the prior art, the position is maintained. Firstly, the applicant argues that **YAMASHITA** does not teach at least one of said two or more species of copolymers with different acid values having an oxyalkylene group containing 3 or more carbon atoms, wherein a content of the polycarboxylic acid copolymer having a polyalkylene glycol side chain containing an oxyalkylene group having 3 or more carbon atoms is 70% by weight or larger, relative to 100% by weight of the total polymer amount contained in the cement admixture. The examiner has considered the applicant's arguments, however, the examiner disagrees. As indicated in the office action on paragraph 3, the total content (% by mass) of the constituent units (I) and (II) in the polymer (A1) is preferably 50 to 100% by mass, more preferably 70 to 100% by mass, relative to the whole polymer (A1) (p. 15, lines 8-11).

More particularly, the applicant argues **YAMASHITA's** examples teach polymers significantly less than 70% by weight. However, the reference is good for all its worth including non-exemplified disclosures. Secondly, the applicant argues **YAMASHITA** teaches the ratio of the acid value is significantly larger than 3.0. The examiner has considered the applicant's arguments, however, the examiner disagrees. **YAMASHITA** teaches the number of milliequivalents of carboxylic groups is 0.4 to 3.0 (p.15, lines 12-30). Moreover, the applicant argues that **YAMASHITA's** examples teach an acid ratio value significantly larger than 3.0. The examiner has considered the applicant's arguments, however, a reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982).

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEVE VALDEZ whose telephone number is (571)270-7738. The examiner can normally be reached on Mon-Thurs, 7:30pm-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. V./
Examiner, Art Unit 1765

/Rabon Sergent/
Primary Examiner, Art Unit 1765